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SIFTING THE DROSS: EXPERT WITNESS TESTIMONY IN MINNESOTA AFTER THE *DAUBERT* TRILOGY

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I. INTRODUCTION

In three cases decided in the 1990s, the U.S. Supreme Court greatly expanded the discretion of trial judges to admit expert testimony.[1] This trilogy requires that trial judges function as gatekeepers by imposing an obligation on judges to screen all expert witness testimony and to refuse entry to experts who offer opinions that are unreliable or unhelpful. The first case in the trilogy, *Daubert v. Merrell Dow Pharmaceuticals*,[2] established the gatekeeper obligation and applied it to science-based expert testimony. In the second case, *General Electric Co. v. Joiner*,[3] the Court made clear that trial courts, not appellate courts, stand at the gate. Finally, in the third case, *Kumho Tire Co., Ltd. v. Carmichael*,[4] the Court expanded the gatekeeper role to include all proposed expert testimony, not just testimony grounded in science.

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1. *See infra* notes 2-4 and accompanying text.
2. 509 U.S. 579 (1993).
3. 522 U.S. 136 (1997).
4. 119 S. Ct. 1167 (1999).

Prior to *Daubert*, many courts often deferred to the scientific community when deciding which opinions to admit into evidence.[5] The Court's insistence that trial judges, not scientists, determine which evidence is admissible should not be viewed as extraordinary.[6] Trial judges are vested with the authority for determining which evidence is admissible, a duty imposed by the modern-day rules of evidence.[7] Nonetheless, the Minnesota Supreme Court has not expressly adopted the gatekeeping obligation recognized in the *Daubert* trilogy. This article will argue that the Minnesota Supreme Court should adopt this obligation. Part II of this article describes the *Daubert* trilogy;[8] Part III discusses Minnesota law concerning admissibility of expert witness testimony;[9] Part IV discusses the need for change in Minnesota;[10] and Part V offers guidance for Minnesota lawyers, assuming that the trilogy is adopted.[11]

II. THE TRILOGY

A. Daubert v. Merrell Dow Pharmaceuticals

Before 1993, several courts, including the Minnesota Supreme Court,[12] followed the standard for admissibility of expert testimony announced in *Frye v. United States*.[13] This standard dictated that expert testimony was admissible if the methodology or testing underlying the expert's opinion was generally accepted in the relevant

5. If the opinion was grounded in methodology that the scientific community had accepted, the opinion was admissible. *See* discussion *infra* Part II (discussing admissibility under the standard announced in Frye v. United States, 293 F. 1013 (App. D.C. 1923)), and *Daubert*, 509 U.S. at 585 (noting that majority of courts followed this standard for assessing admissibility of expert testimony).

6. As noted Jurist Benjamin Cardozo wrote long ago, judges and scientists have much in common: "The work of a judge is in one sense enduring and in another ephemeral. . . . In the endless process of testing and retesting, there is a constant rejection of the dross and a constant retention of whatever is pure and sound and fine." *Daubert*, 509 U.S. at 597 n.13 (quoting BENJAMIN CARDOZO, THE NATURE OF THE JUDICIAL PROCESS 178, 179 (1921)).

7. *See, e.g.*, MINN. R. EVID. 104(a) (noting that the trial judge is to resolve issues of admissibility of evidence); FED. R. EVID. 104(a) advisory committee's notes (noting that "[a]ccepted practice, incorporated in the rule, places on the judge the responsibility" for deciding questions of admissibility of evidence).

8. *See infra* Part II.A–C.

9. *See infra* Part III.

10. *See infra* Part IV.

11. *See infra* Part V.

12. *See, e.g.*, State v. Mack, 292 N.W.2d 764, 768 (Minn. 1980).

13. 293 F. 1013 (App. D.C. 1923).

scientific community.[14] The Court changed the rule in 1993 with *Daubert*—at least with respect to federal courts.

In *Daubert*, plaintiffs argued that Bendectin, a drug marketed by defendant, caused birth defects for which plaintiffs sought compensation.[15] Plaintiffs offered testimony from eight experts, "each of whom . . . possessed impressive credentials" to support the theory that Bendectin caused plaintiffs' injuries.[16] The trial court excluded this expert opinion evidence because the methodology supporting the opinions did not rise to the level of general acceptance.[17] The Court of Appeals for the Ninth Circuit affirmed, citing *Frye*.[18] While the Ninth Circuit and a majority of circuits followed *Frye*,[19] the Third Circuit rejected it, concluding that the *Frye* standard "was too vague and malleable to yield consistent results, and because its nose-counting emphasis often led to the exclusion of helpful evidence in contradiction to the spirit of the Rules of Evidence."[20] The U.S. Supreme Court granted certiorari in *Daubert* to resolve this conflict.[21]

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14. *See id.* The *Frye* court articulated the standard this way:

> Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

Id. at 1014. In *Frye*, defendant took a "deception test" and proffered as an expert the scientist who administered the test. *See id.* at 1013. The prosecution objected and the trial court sustained the objection. *See id.* at 1014. On appeal, the court found that the "systolic blood pressure deception test," an early version of the lie detector test, had not "gained such standing and scientific recognition among physiological and psychological authorities . . . ." *Id.* Accordingly, the proffered testimony was not admissible. *See id.*

15. *See* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 582 (1993).

16. *See id.* at 583.

17. *See* Daubert v. Merrell Dow Pharm., Inc., 727 F. Supp. 570, 572-76 (S.D. Cal. 1989), *aff'd*, 951 F.2d 1128 (9th Cir. 1991), *rev'd*, 509 U.S. 579 (1993).

18. *See* Daubert v. Merrell Dow Pharm., Inc., 951 F.2d 1128, 1129 (9th Cir. 1991), *rev'd*, 509 U.S. 579 (1993).

19. *See Daubert*, 509 U.S. at 585; *see also* United States v. Martinez, 3 F.3d 1191, 1195 (8th Cir. 1993) (noting at that time that a majority of circuits adhered to *Frye*).

20. DeLuca v. Merrell Dow Pharm., Inc., 911 F.2d 941, 955 (3rd Cir. 1990) (citing United States v. Downing, 753 F.2d 1224, 1236-37 (3rd Cir. 1995)).

21. *See Daubert*, 509 U.S. at 585.

The Court held that the adoption of the Federal Rules of Evidence, specifically Rule 702,[22] does not leave room for the *Frye* test.[23] Analyzing Rule 702 much like a statute, the Court noted that "[t]he drafting history makes no mention of *Frye*, and a rigid 'general acceptance' requirement would be at odds with the 'liberal thrust' of the Federal Rules and their 'general approach of relaxing the traditional barriers to "opinion" testimony.'"[24] The Court noted that there were limits on the admissibility of expert testimony and that the trial judge should "screen[] such evidence . . . [to] ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable."[25] This gatekeeper obligation arises from Rule 702 "which clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify."[26]

In rejecting the *Frye* test, the Court also discussed alternative ways to assess expert testimony.[27] The Court described a flexible standard and offered four factors to examine when assessing the reliability of the testimony: (1) whether the theory or technique relied upon has been or can be tested; (2) "whether the theory or technique has been subjected to peer review and publication;" (3) "the potential rate of error" and "the existence and maintenance of standards controlling the technique's operation;" and (4) an examination of the "particular degree of acceptance" of the theory or technique within the relevant community.[28]

Daubert substantially altered the way in which expert testimony was analyzed, leading to extensive commentary.[29] After *Daubert*, ap-

22. *See* FED. R. EVID. 702 ("[I]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand, a witness qualified as an expert may testify thereto in the form of an opinion or otherwise.").

23. *See Daubert*, 509 U.S. at 589.

24. *Id.* at 588 (quoting Beech Aircraft Corp. v. Rainey, 488 U.S. 153, 169 (1988)).

25. *Id.* at 589.

26. *Id.*; *see also* Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293, 296-97 (8th Cir. 1996) "The Supreme Court in *Daubert* makes it plain that the trial court is to act as a gatekeeper in screening such testimony for relevance and reliability, that is, make an assessment whether the reasoning and methodology underlying the testimony is scientifically valid." *Id.* (citing *Daubert*, 509 U.S. at 591-93).

27. *See Daubert*, 509 U.S. at 592-93.

28. *See id.* at 593-94.

29. For example, see Peter B. Knapp, *Alchemy, Evidence, and Expert*, 51 BENCH & B. MINN. 21 (Aug. 1994), and Joseph R. Meaney, *From Frye to Daubert: Is a Pattern Unfolding*, 35 JURIMETRICS J. 191 (1995), for early discussions of the impact of *Daubert*. *See also* Eileen Gay Jones, *Gatekeeping Soothsayers, Quacks and Magicians: Defin-*

pellate courts also were left with an opening to modify the abuse of discretion standard of review used to examine decisions on the admissibility of expert testimony.[30] The Court, however, quickly closed this window with the second case in the trilogy, *General Electric Co. v. Joiner*.[31]

B. General Electric Co. v. Joiner

The appellate court in *Joiner* adopted the stringent standard of review because it perceived that the Court ruled in *Daubert* that there was an implicit preference in the Federal Rules of Evidence for admitting expert testimony.[32] The Court disagreed with this interpretation. The Federal Rules of Evidence might be construed to allow a trial court to admit "a somewhat broader range of scientific testimony than would have been admissible under *Frye*,"[33] but that is not justification for altering the traditional standard of review that applied to issues of admissibility. The Court reasoned that allowing *appellate courts* to subject the issue of admissibility of expert testimony to a more stringent standard of review is inconsistent with the gatekeeping role of *trial courts* set forth in *Daubert*.[34] The Court reaffirmed that the appropriate standard of review for issues of admissibility of expert testimony was abuse of discretion and that this standard applied to decisions to admit or exclude expert testimony.[35]

Chief Justice Rehnquist set the stage for the third part of the trilogy in his partial dissent in *Daubert* when he asked whether the standard offered by the majority would apply to "an expert seeking to testify on the basis of 'technical or other specialized knowl-

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ing Science in the Courtroom, 25 WM. MITCHELL L. REV. 315, 316-17 (1999) (reviewing KENNETH R FOSTER & PETER W. HUBER, *Judging Science: Scientific Knowledge and the Federal Courts* (1997)) (discussing the impact of *Daubert*).

30. *Compare* Joiner v. General Elec. Co., 78 F.3d 524, 529 (11th Cir. 1996) (applying a "particularly stringent standard of review" to the trial judge's exclusion of expert testimony), *rev'd*, 522 U.S. 136 (1997), *and In re* Paoli R.R. Yard PCB Litig., 35 F.3d 717, 750 (3rd Cir. 1994) (applying a "more stringent review" of decisions on admissibility of expert testimony) *with* Duffee v. Murray Ohio Mfg. Co., 91 F.3d 1410, 1411 (10th Cir. 1996) (applying abuse of discretion standard) *and* Buckner v. Sam's Club, Inc., 75 F.3d 290, 292-93 (7th Cir. 1996) (applying abuse of discretion standard).

31. 522 U.S. 136 (1997).

32. *See Joiner*, 78 F.3d at 529.

33. *See Joiner*, 522 U.S. at 140-42.

34. *See id.*

35. *See id.*

edge'—the other types of expert knowledge to which Rule 702 applies—or are the 'general observations' limited only to 'scientific knowledge?'"[36] Debate ensued[37] until the Court decided *Kumho Tire Co., Ltd. v. Carmichael*.[38]

C. Kumho Tire Co., Ltd. v. Carmichael

In *Kumho Tire*, plaintiffs sued a tire manufacturer and distributor for injuries suffered when their minivan overturned after a rear tire blew out.[39] Plaintiffs alleged that a defect in a tire made and distributed by defendants caused the accident.[40] To support their theory of causation, plaintiffs proffered testimony from an expert on tire failure.[41] This expert examined the tire and opined that a manufacturer's defect caused the blowout.[42] Even though the testimony was not based upon scientific knowledge, the trial court conducted a *Daubert* analysis and held that the testimony of plaintiffs' expert was not admissible.[43]

The Eleventh Circuit reversed,[44] applying the *de novo* standard to the trial court's conclusion of law that *Daubert* applied to the expert testimony at issue.[45] The appellate court held that the trial court erred in applying *Daubert* to testimony that was not based upon scientific principles, but upon "skill- or experience-based ob-

36. Daubert v. Merrell Dow Pharm., 509 U.S. 579, 600 (1993) (Rehnquist, C.J., dissenting).

37. *Compare* Watkins v. Telsmith, Inc., 121 F.3d 984, 990-91 (5th Cir. 1997) (applying *Daubert* to testimony that was not based upon scientific knowledge) *and* Peitzmeier v. Hennessy Indus., 97 F.3d 293, 296-98 (8th Cir. 1996) *with* United States v. Cordoba, 104 F.3d 225, 230 (9th Cir. 1997) ("*Daubert* applies only to the admission of scientific testimony."). *See also* Kristina L. Needham, *Questioning The Admissibility of Nonscientific Testimony After Daubert: The Need for Increased Judicial Gatekeeping to Ensure the Reliability of All Expert Testimony*, 25 FORDHAM URB. L.J. 541, 574 (1998) (advocating the need to scrutinize the reliability of nonscientific testimony by applying *Daubert*).

38. 119 S. Ct. 1167 (1999). At the trial level, *Kumho Tire* was Carmichael v. Samyang Tire, Inc. The name changed at the appellate level due to a merger of Kumho Tire and Samyang Tire. *See id.*

39. *See id.* at 1171.

40. *See id.*

41. *See id.*

42. *See id.* at 1172.

43. Carmichael v. Samyang Tire, Inc., 923 F. Supp. 1514, 1521-22 (S.D. Ala. 1996), *rev'd*, 131 F.3d 1433 (11th Cir. 1997), *rev'd sub nom.* 119 S. Ct. 1167 (1999).

44. Carmichael v. Samyang Tire, Inc., 131 F.3d 1433 (11th Cir. 1997), *rev'd sub nom.* 119 S. Ct. 1167 (1999).

45. *See id.* at 1435.

servation."[46] The U.S. Supreme Court reversed, holding that the "gatekeeping obligation" assigned to trial courts in *Daubert* applies to all types of expert testimony.[47]

The Court began its analysis in *Kumho Tire*, as it had in *Daubert*, with the Federal Rules of Evidence.[48] The Court noted that Rule 702 discussed three types of expert testimony—"scientific, technical or other specialized knowledge,"[49]—and that the rule made no "relevant distinction" among the three types.[50] The critical word in Rule 702 for purposes of the *Daubert* analysis is the word "knowledge," not the modifiers of "knowledge."[51] Rule 702's requirement of "knowledge" forms the basis for the standard of reliability applied in *Daubert*.[52] Moreover, the "testimonial latitude" granted to expert witnesses is not limited to those offering testimony based upon scientific principles.[53] Finally, the Court noted that "it would prove difficult, if not impossible, for judges to administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between 'scientific' knowledge and 'technical' or 'other specialized' knowledge. There is no clear line that divides one from the others."[54] For all these reasons, the Court held "that *Daubert's* general principles apply to the expert matters described in Rule 702."[55]

The obligation for trial courts after *Kumho Tire* is to determine "whether the testimony has a 'reliable basis in the knowledge and experience of [the relevant] discipline.'"[56] As for the four factors discussed in *Daubert*,[57] the Court noted that the factors "may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony."[58] Trial courts are in the best position and must be

46. *See id.* at 1435-36.
47. *See Kumho Tire*, 119 S. Ct. at 1171, 1174.
48. *See id.* at 1174; *see also* Daubert v. Merrell Dow Pharm., 509 U.S. 579, 587 (1993) (analyzing the Federal Rules of Evidence).
49. FED. R. EVID. 702.
50. *See Kumho Tire*, 119 S. Ct. at 1174.
51. *See id.*
52. *See id.*
53. *See id.*
54. *Id.*
55. *Id.* at 1175.
56. *Id.* (quoting Daubert v. Merrel Dow Pharm., 509 U.S. 579, 592 (1993)).
57. *See supra* Part II.A. (discussing factors).
58. *Kumho Tire*, 119 S. Ct. at 1167 (quoting *amicus curiae* Brief for United States at 19, Kumho Tire Co., Ltd. v. Carmichael, 119 S. Ct. 1167 (1999) (No. 97-1709)).

given "broad latitude" to decide when those factors might be relevant to assessing reliability and relevancy of a proffered expert's testimony.[59]

III. MINNESOTA'S STANDARD FOR ADMISSIBILITY OF EXPERT TESTIMONY

In Minnesota, the standard for admitting expert testimony varies depending upon the type of testimony offered. If testimony is based upon expertise grounded in something other than science, trial courts have wide discretion, limited only by a requirement that the testimony be helpful to the jury.[60]

However, if testimony is grounded in scientific principles, Minnesota courts seem bound by precedent to follow *Frye* until the Minnesota Supreme Court rules otherwise. Despite *Daubert's* acceptance and application by all of the federal circuits[61] and many of the

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59. *See id.* at 1176.

> [The standard of discretion for trial courts does not constitute] discretion to abandon the gatekeeping function [and] . . . it is not discretion to perform the function inadequately. Rather, it is discretion to choose among reasonable means of excluding expertise that is fausse and science that is junky. Though, as the Court makes clear today, the *Daubert* factors are not holy writ, in a particular case the failure to apply one or another of them may be unreasonable, and hence an abuse of discretion.

Id. at 1179 (Scalia J., concurring) (emphasis omitted).

60. *See, e.g., In re* Welfare of K.A.S., 585 N.W.2d 71, 76 (Minn. Ct. App. 1998) ("Expert testimony is generally admissible if: '(1) it assists the trier of fact, (2) it has a reasonable basis, (3) it is relevant, and (4) its probative value outweighs its potential for prejudice.'") (quoting State v. Jensen, 482 N.W.2d 238, 239 (Minn. Ct. App. 1992)); Steiner v. Beaudry Oil & Serv., Inc., 545 N.W.2d 39, 44-45 (Minn. Ct. App. 1996) (expert with 29 years experience in industry properly allowed to describe standard procedures used in industry and defendant's duty); ZumBerge v. Northern States Power Co., 481 N.W.2d 103, 108-09 (Minn. Ct. App. 1992) (holding that expert testimony from economist regarding plaintiff's damages, albeit based upon "unique" methodology, was properly admitted); Hahn v. Tri-Line Farmers Co-op, 478 N.W.2d 515, 525 (Minn. Ct. App. 1991) (determining that vocational expert properly allowed to testify "that it is difficult for a person from a small town to move to Minneapolis for rehabilitation" because such testimony was helpful to the jury); Behlke v. Conwed Corp., 474 N.W.2d 351, 357 (Minn. Ct. App. 1991) ("Once foundation is established and if the trial court determines the specialized knowledge will aid the jury, then a sufficient foundation for a relevant opinion has been established."); Johnson v. Southern Minn. Mach. Sales, Inc., 460 N.W.2d 68, 72 (Minn. Ct. App. 1990) (holding that "human factors engineer" properly was allowed to testify to plaintiff's negligence because testimony assisted jury).

61. *See, e.g.*, Ambrosini v. Labarraque, 101 F.3d 129, 131 (D.C. Cir. 1996);

states that once adhered to *Frye*,[62] the Minnesota Supreme Court has not expressly adopted this standard.[63] In the absence of an express holding from the Court, Minnesota courts appear bound by the *Frye* standard when assessing the admissibility of scientific ex-

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United States v. Posado, 57 F.3d 428, 429 (5th Cir. 1995); United States v. Dorsey, 45 F.3d 809, 814 (4th Cir. 1995); United States v. Davis, 40 F.3d 1069, 1072 n.4 (10th Cir. 1994); *In re* Paoli R.R. Yard PCB Litig., 35 F.3d 717, 732 (3d Cir. 1994); United States v. Lee, 25 F.3d 997, 998 (11th Cir. 1994); United States v. Sepulveda, 15 F.3d 1161, 1183 (1st Cir. 1993); United States v. Bonds, 12 F.3d 540, 554 (6th Cir. 1993); United States v. Amador-Galvan, 9 F.3d 1414, 1417-18 (9th Cir. 1993); Hodges v. Secretary of Dep't of Health and Human Serv., 9 F.3d 958, 966 (Fed. Cir. 1993); Porter v. Whitehall Lab., Inc., 9 F.3d 607, 612 (7th Cir. 1993); United States v. Locascio, 6 F.3d 924, 938 (2d Cir. 1993); United States v. Martinez, 3 F.3d 1191, 1196 (8th Cir. 1993).

62. *See, e.g.*, State v. Coon, 974 P.2d 386 (Alaska 1999); State v. Porter, 698 A.2d 739, 746 (Conn. 1997) (replacing *Frye* test with *Daubert* standard); Steward v. State, 652 N.E.2d 490, 498 (Ind. 1995) ("[A]lthough not binding upon the determination of state evidentiary law issues, the federal evidence law of *Daubert* and its progeny is helpful to the bench and bar in applying Indiana Rule of Evidence 702(b)."); Mitchell v. Commonwealth, 908 S.W.2d 100, 101 (Ky. 1995) ("Fed. R. Evid. 702 and KRE [Kentucky Rules of Evidence] 702 contain the same language. . . . Accordingly, we adopt the standard of review set forth in *Daubert*."); State v. Foret, 628 So. 2d 1116, 1123 (La. 1993) ("As the Louisiana Code of Evidence provision on expert testimony is identical to the Federal Rules, it follows that this Court should carefully consider the *Daubert* decision that soundly interprets an identical provision in the federal law of evidence."); Commonwealth v. Lanigan, 641 N.E.2d 1342, 1349 (Mass. 1994) ("We accept the basic reasoning of the *Daubert* opinion because it is consistent with our test of demonstrated reliability."); State v. Alberico, 861 P.2d 192, 203 (N.M. 1993) (rejecting *Frye* and adopting *Daubert*, noting that "New Mexico's Rule 702 is identical to Rule 702 in the Federal Rules of Evidence"); Taylor v. State, 889 P.2d 319, 328-330 (Okla. Crim. App. 1995) (replacing *Frye* test with *Daubert* standard); State v. Hofer, 512 N.W.2d 482, 484 (S.D. 1994) (replacing *Frye* test with *Daubert* standard); State v. Brooks, 643 A.2d 226, 229 (Vt. 1993) ("Similar principles [to those discussed in *Daubert*] should apply here because Vermont's rules are essentially identical to the federal ones on admissibility of scientific evidence."); Wilt v. Buracker, 443 S.E.2d 196, 203 (W. Va. 1993) (replacing *Frye* test with *Daubert* standard).

63. See Steven Terry, *Evidence*, 22 WM. MITCHELL L. REV. 237, 243 (1996) for a discussion of whether the Minnesota Supreme Court's decisions in State v. Bloom, 516 N.W.2d 159 (Minn. 1994), and Fairview Hosp. v. St. Paul Fire & Marine, 535 N.W.2d 337 (Minn. 1995), might constitute implicit endorsements of *Daubert*. In State v. Hodgson, 512 N.W.2d 95 (Minn. 1994), the court held that it need not decide "the issue of what impact *Daubert* should or will have in Minnesota." *See id.* at 98. This holding was premised upon the court's conclusion that the testimony at issue—"basic bite-mark analysis by a recognized expert"—was not "a novel or emerging type of scientific evidence." *Id.* However, as the court in *Daubert* noted, the requirements of Rule 702 do not apply "exclusively to unconventional evidence." Daubert v. Merrell Dow Pharm., 509 U.S. 579, 592 n.11 (1993). Thus, it appears that the court's avoiding the question in *Hodgson* may have been in error. This is particularly true in light of the broad applicability of the *Daubert* standard.

pert testimony.[64]

Most recently, when faced with an issue of admissibility of scientific expert testimony, courts in Minnesota seem to apply both *Frye* and *Daubert*, or avoid determining which standard applies. For example, in *Ross v. Schrantz*,[65] the plaintiff, a car accident victim, intended to use evidence obtained through quantitative electroencephalography (QEEG) to show that she suffered a closed head injury.[66] The trial court excluded the proffered testimony under the *Frye* standard.[67] On appeal, plaintiff argued that the trial court erred because it did not apply *Daubert*.[68] The Minnesota Court of Appeals disagreed and found that *Frye* still governed in Minnesota.[69] However, the appellate court then assessed the proffered testimony under *Frye* and *Daubert*, concluding that it was inadmissible under both.[70] The court of appeals followed the same dual inquiry in *Wesely v. Alexander*,[71] a medical malpractice case.

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64. For a discussion of the Minnesota decisions that examine the applicability of the *Frye* standard after *Daubert*, see Terry, *supra* note 63, at 243, and Wil Fluegel, *Admissibility of Expert Testimony: Application of Daubert and the Mack/Frye Test*, 22 MINN. TRIAL LAW, Fall 1997, at 10. One commentator has argued that *Daubert* does not reflect much of a change from Minnesota's current practice. *See* Wilbur W. Fleugel, *Will* Daubert *Alter Minnesota Practice?*, 20 MINN. TRIAL LAW, Winter 1995, at 12 [hereinafter Fluegel I]. Fluegel argues that Minnesota follows a modified version of the *Frye* test. First, Minnesota courts consider general acceptance of the theory or technique underlying the opinion. *See* Fluegel I at 13. Second, Minnesota courts look to determine whether the theory or technique is reliable. *See id.* Because Minnesota courts already test reliability, Fluegel suggests that the application of *Daubert* in Minnesota would not be much of a change. *See id.* at 39. Missing from the analysis, however, is that in Minnesota, examining reliability merely is another way of looking for general acceptance by the relevant scientific community. In *State v. Mack*, 292 N.W.2d 764 (Minn. 1980), the court considered whether the scientific community believed that the test was reliable. *See id.* at 768. The court stated the test in Minnesota as follows: "[T]he results of mechanical or scientific testing are not admissible unless the testing has developed or improved to the point where *experts in the field* widely share the view that the results are scientifically reliable as accurate." *Id.* (emphasis added); *see also* State v. Schwartz, 447 N.W.2d 422, 424 (Minn. 1989) (holding that the *Frye* test requires that "*experts in the field* generally agree that the evidence is reliable and trustworthy") (emphasis added). In *Daubert*, the inquiry is much broader, looking not only to what experts in the field believe, but to other objective factors reflecting reliability as well. *See Daubert*, 509 U.S. at 590.

65. No. C8-94-1729, 1995 WL 254409, at *1 (Minn. Ct. App. May 2, 1995).

66. *See id.*

67. *See id.*

68. *See id.*

69. *See id.*

70. *See id.* at *2.

71. No. C0-96-613, 1996 WL 722084 (Minn. Ct. App. Dec. 10, 1996).

The court of appeals avoided the issue of which standard to use in *Ledin v. State*.[72] In that case, defendant sought to overturn his conviction because the trial court refused to admit polygraph evidence.[73] Polygraph evidence has been excluded in Minnesota because it does not satisfy *Frye*.[74] Defendant argued that this blanket exclusion no longer was appropriate since the U.S. Supreme Court rejected *Frye* in *Daubert*.[75] With the rejection of *Frye*, defendant claimed, he at least was entitled to an evidentiary hearing on the issue of the admissibility of the polygraph evidence.[76]

The procedural posture of *Ledin*—affirmance of the conviction followed by review of the denial of a postconviction petition—allowed the court to apply a standard of review that precluded ruling whether *Daubert* should have been applied. In order to receive post-conviction relief, the court noted that defendant needed to identify a "novel" theory, one that was not available to him at the time of the appeal of his conviction.[77] Defendant failed to meet this standard because *Daubert* was handed down in 1993, two years before defendant's trial.[78] Accordingly, the court of appeals avoided deciding whether the standard was *Daubert* or *Frye*.

At least one judge on the court of appeals appears ready to recognize *Daubert's* applicability in Minnesota, at least in non-scientific cases. In *Gross v. Victoria Station Farms, Inc.*,[79] Judge Short applied *Daubert* in her dissenting opinion.[80] Plaintiff sought damages for injuries to his horse while it was boarded at defendant's facility.[81] Specifically, plaintiff alleged that his horse had subsequent and continuing lameness problems as a result of an accident while the horse was under defendant's care.[82] Plaintiff supported his theory of causation with an affidavit from a proposed expert.[83] The

72. No. C7-97-876, 1997 WL 757156 (Minn. Ct. App. Dec. 9, 1997).
73. *See id.* at *1.
74. *See, e.g.*, State v. Anderson, 379 N.W.2d 70, 79 (Minn. 1985) (citing *Frye* and excluding polygraph evidence based on the ruling in *Frye* and the decision in State v. Michaeloff, 324 N.W.2d 926, 927 (Minn. 1992) (holding polygraph test results inadmissible because there is insufficient evidence of reliability)).
75. *See Ledin*, No. C7-97-876, 1997 WL 757156, at *1.
76. *See id.*
77. *See id.* at *1-2.
78. *See id.* at *2.
79. No. C4-97-477, 1997 WL 471388 *1 (Minn. Ct. App. Aug. 19, 1997), *rev'd*, 578 N.W.2d 757 (Minn. 1998).
80. *See id.* at *6.
81. *See id.* at *1.
82. *See id.*
83. *See id.* at *3.

trial court ruled that plaintiff's proffered expert was not competent to render an opinion on causation and granted defendant's motion for summary judgment.[84] The court of appeals reversed, finding that the trial court "applied too narrow a definition of 'expert' in its review of . . . [plaintiff's expert's] qualifications."[85] Rather than apply Rule 702 narrowly, the court noted that "Minnesota courts have adopted a broad interpretation of expertise."[86] Even though plaintiff's expert was not a veterinarian and had no experience treating horses for injuries, the court found that she was qualified to render an opinion on causation.[87] The majority cited the proffered expert's educational background, her publications and ownership of a horse that experienced a similar injury.[88] This experience provided the expert with sufficient knowledge to render an opinion in the case.[89] Judge Short disagreed.[90] In her dissent, Judge Short concluded that plaintiff's expert testimony on causation was nothing more than dressed-up lay testimony based upon "an inadequate factual foundation."[91] Accordingly, the testimony ran afoul of *Daubert's* reliability requirement.[92]

The Minnesota Supreme Court granted review and agreed with Judge Short, holding that the trial court properly granted summary judgment for the defendant.[93] The court noted that the court of appeals applied a *de novo* standard of review, rather than the required abuse of discretion standard, to the issue of admissibility of expert testimony.[94] The appellate court's standard of review was erroneous.[95] Applying the correct standard of review, the court

84. *See id.* at *2.
85. *Id.*
86. *Id.* at *3.
87. *See id.* at *4.
88. *See id.* at *3.
89. *See id.* at *3-4.
90. *See id.* at *5-6 (Short, J., dissenting).
91. *See id.* at *5 (Short, J., dissenting).
92. *See id.* at *5 (Short, J., dissenting). Judge Short applied *Daubert* in a somewhat similar fashion in writing for the court in *Barna v. Commissioner of Pub. Safety*, 508 N.W.2d 220, 222 (Minn. Ct. App. 1993) (upholding admission of expert testimony because it met reliability requirement). While the test at issue was found to be "generally accepted by experts in the field[,]" it could be argued that the focus of the decision was on the reliability requirement expressed in *Daubert*. *See id.* (citing *Daubert*) (other citations omitted).
93. *See* Gross v. Victoria Station Farms, Inc. 578 N.W.2d 757, 761-62 (Minn. 1998).
94. *See id.* at 761.
95. In this regard, the Court adhered to, without citing, *General Elec. Co. v. Joiner*, 522 U.S. 136 (1997). Regarding the second leg of the trilogy, the Minnesota

sustained the trial court's exclusion of the proffered expert testimony.[96] Although the supreme court did not reach Judge Short's discussion of reliability, implicit in its holding is a conclusion that before expert testimony will be admissible, it must be supported by something more than the "*ipse dixit* of the expert,"[97] a conclusion completely consistent with the reliability requirement in *Daubert*.

IV. THE CASE FOR CHANGE

Minnesota courts have followed the *Frye* standard for more than forty years.[98] However, "the rule of *stare decisis* is not an inflexible rule of law but rather a policy of the law."[99] The doctrine gives way and earlier decisions are rejected when necessary to "adapt the law to the . . . conditions of the times . . . ."[100] Many

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Supreme Court long has recognized the broad discretion given to trial courts in ruling on admissibility of expert testimony. *See* Benson v. Northern Gopher Enter., Inc., 455 N.W.2d 444, 445 (Minn. 1990) ("It has long been the law in this state that evidentiary rulings, including a decision to exclude expert testimony, lie within the sound discretion of the trial court.") (citing Detroit Lakes Realty Co. v. Mckenzie, 204 Minn. 490, 493, 284 N.W. 60, 62 (1939)). The breadth of this discretion means that a trial court's decision will be upheld even though a reviewing court would have reached a different conclusion, as long as the court has not abused its "wide latitude." *See Benson*, 455 N.W.2d at 446. The court of appeals attempted to restrain the trial court's authority in admissibility of expert testimony by imposing a requirement that expert testimony on issues of causation be admitted if it probative. *See* Benson v. Northern Gopher Enter., Inc., 446 N.W.2d 678, 680 (Minn. Ct. App. 1989), *rev'd*, 455 N.W.2d 444 (Minn. 1990). The supreme court rejected this attempt to limit the authority of trial judges who were in the best position to screen the evidence. *See Benson*, 455 N.W.2d at 446 (holding that "evidentiary rules demand a case by case analysis, an analysis best left to the trial judge familiar with the 'setting' of the case").

96. *See Gross*, 578 N.W.2d at 762 (Minn. 1998) ("The record indicates that Bennett had no experience in diagnosing equine lameness. Her background does not include any veterinary science studies, and her work and research has focused only on horse evolution and conformation rather than equine lameness diagnosis.").

97. *Joiner*, 522 U.S. at 137.

98. *See* State v. Kolander, 236 Minn. 209, 220, 52 N.W.2d 458, 464 (1952).

99. Johnson v. Chicago, Burlington & Quincy R.R. Co., 243 Minn. 58, 68, 66 N.W.2d 763, 770 (1954).

100. *See id.* at 771. In *Johnson*, the court changed Minnesota law by adopting the doctrine of *forum non conveniens*. *See id.* at 776. The rationale in part was that such a doctrine had been passed to apply to the Federal courts: "In view of the fact that congress has now adopted the rule of *forum non conveniens* in connection with such actions brought in federal court, there seems to be no good reason why we should not follow the same procedure when such actions are brought in our court." *Id.* at 773. This rationale likewise argues in favor of adopting the *Daubert* trilogy.

"conditions" have changed in the seventy-five years since *Frye* was decided. Perhaps the most important advancement was the adoption of rules of evidence, which set forth standards for courts to use in assessing the admissibility of evidence.[101] Minnesota law should adopt to these changed conditions by expressly rejecting the *Frye* test in favor of the *Daubert* trilogy.[102]

One of the most frequent criticisms of the *Frye* test is that it precludes the admission of valid, reliable and relevant testimony merely because the testimony is based upon a technique or test that has not been around long enough to rise to the level of "general acceptance."[103] Another criticism is that the *Frye* test, while purportedly objective, is open to subjective application in that the trial judge chooses the relevant scientific community in which "general acceptance" is tested.[104] Finally, and perhaps, most importantly, the *Frye* test "abdicate[s] judicial responsibility for determining admissibility to scientists uneducated in the law."[105] These valid criticisms of the *Frye* test counsel in favor of a new approach.

Other arguments based on the Minnesota Rules of Evidence support adopting *Daubert*. Like the federal courts' interpretation of the Federal Rules of Evidence,[106] Minnesota courts also recognize "the approach to a more liberal introduction of evidence as sug-

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101. *See infra* notes 106-17 (discussing Minnesota Rules of Evidence).

102. *But see* People v. Leahy, 882 P.2d 321, 328-31 (Cal. 1994) (doctrine of *stare decisis* required rejecting *Daubert* in favor of *Frye* test).

103. *See generally* MCCORMICK ON EVIDENCE § 203, at 871-73 (John W. Strong ed., 4th ed. 1992). *See also* Taylor v. State, 889 P.2d 319, 328 n.31 (discussing "significant shortcomings" of *Frye* test, including test's exclusion of "'a new discovery even though there may be direct experimental or clinical support for the principle[ ]'" and fact that history has shown that "generally accepted scientific theory is not always correct") (citing and quoting State v. Bible, 858 P.2d 1157, 1181 (Ariz. 1993)).

104. *See, e.g.*, State v. Coon, 974 P.2d 386, 397 (Alaska 1999):

> Nevertheless, the *Frye* standard has also been criticized for being easily manipulated by courts when deciding whether to admit certain evidence. The lack of a definitional framework for "field" and "general acceptance" allowed courts deciding whether to admit scientific evidence to confine the "field" of pertinent inquiry narrowly to a specialty within a broader scientific discipline in order to demonstrate "general acceptance."

Id. at 397 (quoting Jay P. Kesan, *An Autopsy of Scientific Evidence in a Post-Daubert World*, 84 GEO. L.J. 1985, 1990 (1996)).

105. *Coon*, 974 P.2d at 392.

106. *See Daubert v. Merrell Dow Pharm.*, 509 U.S. 579, 588 (1993).

gested by our new rules of evidence adopted in 1977."[107] The Minnesota Rules of Evidence provide at least three sources for adhering to *Daubert*.[108] First, like the federal rule, Minnesota Rules of Evidence 104(a), vests in trial courts the duty to assess the admissibility of evidence.[109] As other courts have noted, the standards for judicial reliability and admissibility are not necessarily the same as the standards used by scientists to test validity.[110] Accordingly, it does not seem appropriate for trial judges to delegate their responsibility under Minnesota Rules of Evidence 104(a) to scientists or other technical experts.[111]

Second, Minnesota Rules of Evidence 702 counsels in favor of adopting the trilogy in Minnesota. As the Minnesota Court of Appeals noted, "*Daubert's* persuasive force in Minnesota may be strengthened by the fact that our rules of evidence are modeled after the federal rules."[112] This is an understatement. Not only are Minnesota's rules modeled after the federal counterpart, but Minnesota Rules of Evidence 702 *is identical to* Federal Rules of Evidence 702. Accordingly, the holding in *Daubert*—that the language of Federal Rules of Evidence 702 leaves no room for the *Frye* standard—inescapably seems to apply to Minnesota Rules of Evidence 702.[113] As in other cases, when the federal counterpart is identical to the Minnesota rule, the Minnesota Supreme Court should rec-

107. County of Ramsey v. Miller, 316 N.W.2d 917, 921 (Minn. 1982).

108. *See infra* notes 109, 112, 116 and accompanying text.

109. *See* MINN. R. EVID. 104(a); *see also* FED. R. EVID. 104(a).

110. *See Coon*, 974 P.2d at 395-96.

111. *See* Taylor v. State, 889 P.2d 319, 329 (Okla. Crim. App. 1995) ("In testing for the admissibility of a particular type of scientific evidence, whatever the scientific 'voting' pattern may be, the courts cannot in any event surrender to scientists the responsibility for determining the reliability of that evidence.") (quoting United States v. Williams, 583 F.2d 1194, 1198 (2d Cir. 1978)).

112. State v. Alt, 504 N.W.2d 38, 46 (Minn. Ct. App. 1993), *rev'd in part on other grounds*, 505 N.W.2d 72 (Minn. 1993) (citing MINN. R. EVID. 101 cmt).

113. In Hutton v. State, 663 A.2d 1289 (Md. 1995), the Maryland Court of Appeals considered a similar argument and declined to adopt *Daubert*. *See id.* at 1296 n.10. While the Maryland rule on expert testimony was similar to Fed. Rule 702, the commentary to Maryland's rule articulated that the passage of the rule was not meant to overrule Maryland's adherence to the *Frye* test. *See id.* (citing committee note to MD. R. EVID. 5-702). The committee comment to MINN. R. EVID. 702 does not contain a similar endorsement of *Frye*. *See* MINN. R. EVID. 702 committee comment. It could be argued that the comment is much more consistent with *Daubert's* emphasis on the role of the trial court than with *Frye's* general acceptance standard. *See id.* (noting that trial court has discretion to determine admissibility of expert testimony).

ognize that the federal standard applies.[114] Indeed, several of the states that have adopted *Daubert* have done so because of the similarity of the states' versions of Rule 702 and Federal Rule 702.[115]

Third, Minnesota Rules of Evidence 703 supports the adoption of the *Daubert* standard. Under this rule, for expert testimony to be admissible, the testimony must be based upon the type of information "reasonably relied upon" by others in their field.[116] As the Alaska Supreme Court noted, this rule "is also a source for an approach broader than the *Frye* standard."[117]

Leaving aside criticisms of the *Frye* standard and the Minnesota Rules of Evidence, there are many practical reasons for leaving *Frye* in the past and looking to the future with the *Daubert* trilogy. The *Daubert* standard recognizes that trial judges, not scientists or technicians, are best suited to decide what evidence is admissible and the reason for its admissibility. Trial judges benefit from briefing by advocates and can request supplemental information as judges deem appropriate.[118] Trial judges also have the benefit of repeatedly assessing admissibility of expert testimony. From this repetition, judges develop their own expertise in resolving issues of admissibility.[119] Trial judges also may benefit from independently retained expert assistance under Minnesota Rules of Evidence 706.[120]

The standard adopted in *Daubert* also allows a more flexible and comprehensive inquiry than the *Frye* standard. This flexibility is important because science and technology continually evolve.[121] Trial judges must know of these advancements to ensure that justice is served.

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114. *See, e.g.*, Slater v. Baker, 301 N.W.2d 315, 318 (Minn. 1981) ("Rule 801(d)(1)(B) of the Minnesota Rules of Evidence is patterned after its counterpart in the Federal Rules of Evidence. As such the analysis . . . of Federal Rules of Evidence is instructive.").

115. *See, e.g.*, Mitchell v. Commonwealth, 908 S.W.2d 100, 101 (Ky. 1995); State v. Foret, 628 So. 2d 1116, 1123 (La. 1993); State v. Alberico, 861 P.2d 192, 203 (N.M. 1993); State v. Brooks, 643 A.2d 226, 229 (Vt. 1993).

116. *See* MINN. R. EVID. 703.

117. State v. Coon, 974 P.2d 386, 393 (Alaska 1999).

118. *See id.*; State v. Porter, 698 A.2d 739, 748 (Conn. 1997).

119. *See Porter*, 698 A.2d at 748 ("[A]n important element in adjudication is the development of judicial expertise through repeated exposure to and familiarity with similar scientific issues.") (quoting Kesan, *supra* note 104, at 2038).

120. *See* MINN. R. EVID. 706(a) (providing mechanism for appointment of experts to assist trial judge); *see also Coon*, 974 P.2d at 393 (noting use of independent experts).

121. *See Coon*, 974 P.2d at 398; *Alberico*, 861 P.2d at 201-03.

Finally, after *Kumho Tire*, the flexible *Daubert* standard applies to all types of expert testimony.[122] Minnesota courts do not adhere to the *Frye* standard when addressing admissibility of expert testimony that is based upon non-scientific specialized knowledge.[123] As discussed above, outside the sciences, the principle inquiry seems to be whether the testimony will be helpful to the jury.[124] The issue of reliability—at the heart of the *Daubert* standard—has been held to go to the weight, not the admissibility of the expert testimony.[125] Adopting the *Daubert* trilogy ensures that assessment of all expert testimony in Minnesota is assessed consistent with the gatekeeping obligation.

One of the purposes in adopting the Minnesota Rules of Evidence, presumably, was to provide uniformity in practice for lawyers and judges.[126] However, given the Minnesota Supreme Court's unwillingness to express an opinion on *Daubert*, trial and appellate courts are left to apply varying standards for admissibility of expert testimony. This variation and confusion is inconsistent with the mandate in Minnesota Rules of Evidence 102 that the rules of evidence be construed to ensure "fairness in administration, [and] elimination of unjustifiable expense and delay . . . ."[127] Surely, the court would comply with this purpose if it announced once and for all that *Daubert* and its progeny apply in Minnesota to all types of expert testimony.[128]

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122. *See* Kumho Tire Co. v. Carmichael, 119 S. Ct. 1167, 1175 (1999) (holding that the *Daubert* standard applies to all types of expert testimony).

123. *See supra* note 60.

124. *See supra* note 60.

125. *See* State v. Myers, 359 N.W.2d 604, 611 (Minn. 1984) ("The reliability of expert opinion testimony with regard to the existence or cause of the condition goes not to the admissibility of the testimony but to its relative weight.") (citing State v. Langley, 354 N.W.2d 389, 401 (Minn. 1984)).

126. *See* Preliminary Comment to MINN. R. EVID. (noting the federal rules provide for uniformity); *see also* MINN. R. EVID. 102 (discussing purpose of rules of evidence).

127. *See* MINN. R. EVID. 102.

128. For those who fear that application of the *Daubert* standard will open the floodgates to expert testimony, the opinion in *Daubert* on remand needs to be examined. *See* Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311, 1319 (9th Cir. 1995). On remand, the opinions still were excluded as unreliable. *See id.* at 1321. The court concluded that the opinions did not satisfy either of the requirements of Rule 702. *See id.* The opinions were not "scientific knowledge" because they were not based upon independent research, had not been the subject of peer review and were not accompanied by any other external source to validate the methodology used by the experts. *See id.* at 1317-19. The court concluded that it had "been presented with only the experts' qualifications, their conclusions and

V. APPLICATION OF THE TRILOGY

Assuming that the Minnesota Supreme Court is presented with the proper case and expressly adopts the trilogy, a discussion of what Minnesota practitioners can expect is appropriate. Under *Daubert*, as interpreted by *Kumho Tire*, the role of the trial court is to determine "that any and all [expert] testimony or evidence admitted is not only relevant, but reliable."[129] Minnesota's Rule of Evidence 702 supplies the framework for this determination. The rule provides: "If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."[130] *Daubert* should be the guide in interpreting this rule.

According to *Daubert*, the rule imposes two requirements.[131] First, the testimony at issue must relate to scientific or other specialized knowledge.[132] The modifiers to "knowledge" in Rule 702 (scientific, technical or other specialties) "impl[y] a grounding in the methods and procedures of" the relevant subject matter.[133] And, the word "knowledge" in the rule "connotes more than subjective belief or unsupported speculation."[134] To qualify as "knowledge" under the rule, an expert's opinion must be "supported by appropriate validation—*i.e.*, 'good grounds,' based on what is known."[135] The first requirement then "establishes a standard of evidentiary reliability."[136]

Second, Rule 702 requires that the proffered expert's testi-

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their assurances of reliability. Under *Daubert*, that's not enough." *Id.* at 1319. As for the second prong of Rule 702, the court concluded that it was not satisfied because the experts testified only that Bendectin was "capable of causing" birth defects. *See id.* at 1320. The experts did not opine that Bendectin caused the birth defects at issue in the case, or that the drug more than doubled the risk of birth defects. *See id.* at 1322. Accordingly, the court concluded the opinions would not be helpful to the jury. *See id.* at 1320-22.

129. Daubert v. Merrell Dow Pharm., 509 U.S. 579, 589 (1993).

130. MINN. R. EVID. 702.

131. *See Daubert*, 509 U.S. at 589-91. These areas arise from the screening requirements in FED. R. EVID. 104(a). Minnesota's counterpart is identical. *See* MINN. R. EVID. 104(a).

132. *See Daubert*, 509 U.S. at 590.

133. *See id.*

134. *Id.* at 590.

135. *Id.*

136. *Id.*

mony be of assistance to the jury in understanding the evidence or in determining a fact.[137] "This condition goes primarily to relevance," and "requires a valid scientific connection to the pertinent inquiry" at hand.[138] The careful Minnesota lawyer then must prepare in both areas.

The analysis in the last two cases in the trilogy provide important illustrations regarding the scrutiny applied to expert testimony if the trilogy is adopted. In *Joiner*, the Court concluded that the trial court did not abuse its discretion in excluding the testimony.[139] The experts planned to testify that plaintiff's injury (lung cancer) was caused by his exposure to polychlorinated biphenyls (PCBs) manufactured by defendant.[140] The testimony was based on tests conducted on animals and four epidemiological studies.[141] The Court reviewed these studies and concluded that the trial court did not abuse its discretion in finding that the tests did not provide an appropriate basis upon which to ground expert testimony that exposure to PCBs caused plaintiff's cancer.[142] The conclusion that the testimony was not admissible seems to be grounded in a failure to satisfy the first requirement of Rule 702.

Kumho Tire likewise provides useful guidance for counsel, and it demonstrates the importance of using the discovery process in connection with expert witness evidence. In *Kumho Tire*, plaintiffs' proposed expert was going to opine that the tire blowout, which led to the minivan accident, occurred because of a manufacturer's defect in the tire.[143] No one disputed that the blowout was caused because the tire's tread separated from its carcass.[144] The issue was "whether the expert could reliably determine the cause of this tire's separation."[145] Plaintiffs' expert opined that it was a defect.[146]

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137. *See* MINN. R. EVID. 702.
138. *See Daubert*, 509 U.S. at 591-92.
139. *See* General Elec. Co. v. Joiner, 522 U.S. 136, 143 (1997).
140. *See id.*
141. *See id.* at 143-44.
142. *See id.* at 146-47. The animal studies were insufficient because the animals had been injected with much larger doses of PCBs than plaintiff. *See id.* at 144. In addition, the animals developed a different form of cancer than plaintiff. *See id.* The epidemiological studies were insufficient because language within the studies indicated a lack of evidence for concluding that exposure to PCBs caused lung cancer. *See id.* at 146-47.
143. *See* Kumho Tire Co., Ltd. v. Carmichael, 119 S. Ct. 1167, 1171 (1999).
144. *See id.* at 1172.
145. *Id.* at 1177.
146. *See id.* at 1172.

However, the expert had testified at deposition that overdeflection[147] also causes separation and explained that there are four symptoms of overdeflection.[148] As the Court noted, the expert confirmed in his deposition that evidence of two of the four symptoms appeared in the tire at issue.[149] Accordingly, the district court found that the expert's testimony was unreliable.[150] Moreover, the expert was unable to confirm how many miles the tire had traveled and, although purporting to base his opinion on visual inspection of the tire, he had not seen the tire until the morning of his deposition.[151] Instead, his report was generated on the basis of photographs.[152] The report was internally inconsistent with the opinion expressed at the deposition and plaintiffs were not able to identify any studies that relied upon the same methodology as their proffered expert.[153] All of these factors led the Court to conclude that the expert's opinion was properly excluded under *Daubert* as not sufficiently reliable.[154]

As reflected in both *Joiner* and *Kumho Tire*, the "methods and procedures" of the relevant field upon which an expert's opinions are based must be identified and counsel must ensure that the proffered opinions are in accord with these methods and procedures.[155] For example, if the expert is going to opine in a sex dis-

147. *See id.* (stating that overdeflection occurs when a tire is underinflated or driven while carrying too much weight causing heat which affects the bond between the tread and carcass).

148. *See id.* at 1178.

149. *See id.* at 1173.

150. *See id.* at 1178.

151. *See id.* at 1177.

152. *See id.*

153. *See id.* at 1177-79.

154. *See id.* at 1179. The Eighth Circuit applied a similar analysis in a recent case. *See* Jaurequi v. Carter Mfg. Co., Inc., 173 F.3d 1076 (8th Cir. 1999). In that case, plaintiff alleged that design defects and inadequate warnings in a corn head (a piece of equipment attached to a combine used when harvesting corn) manufactured by defendant caused plaintiff's injuries. *See id.* at 1079-80. Plaintiff supported his causation theory with the testimony of two engineers, which the trial court excluded. *See id.* at 1081. The Eighth Circuit, citing *Kumho Tire*, held that *Daubert* properly was applied to the inquiry even though the testimony was not scientific. *See id.* at 1085. In sum, the court found that the experts' testimony was "extremely questionable" and that it was well within the district court's broad discretion to exclude such testimony. *See id.* at 1084.

155. *See* Daubert v. Merrell Dow Pharm., 509 U.S. 579, 590 (1993). In *Kumho Tire*, the methodology at issue was assessing tire failure through "visual or tactile inspection of the tire." *See Kumho Tire*, 119 S. Ct. at 1178. The problem for plaintiffs was that their expert's opinion was inconsistent with the methodology he purported to follow. *See id.* In *Joiner*, the expert purported to rely upon animal studies

crimination case—brought under the Minnesota Human Rights Act (MHRA)—that sexual harassment caused plaintiff to suffer post-traumatic stress disorder (PTSD), the relevant "methods and procedures" likely would be found in the American Psychiatric Association's diagnostic criteria.[156] Counsel should compare conclusions of the expert with relevant diagnostic criteria to determine if these criteria support the proffered opinion. According to DSM-IV, a diagnosis of post traumatic stress disorder requires "exposure to an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity . . . ."[157] DSM-IV lists specific examples which satisfy this definition.[158] An expert opining that exposure to something less, say, non-physical sexual harassment, would be inconsistent with this criteria and arguably would not satisfy *Daubert's* standard of reliability.[159]

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to support his conclusion. General Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997). The court however, concluded that "there [was] simply too great an analytical gap between the data and the opinion proffered" for the opinion to be properly considered grounded in the methods and procedures of science. *See id.* (citing Turpin v. Merrell Dow Pharm., Inc., 959 F.2d 1349, 1360 (6th Cir. 1992)).

156. *See* DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, xxvii (4th ed. 1994) [hereinafter DSM-IV] ("These diagnostic criteria and the DSM-IV classification of mental disorders reflect a consensus of current formulations of evolving knowledge in our field."); *see also* Roe v. Chater, 92 F.3d 672, 676 nn.4, 5 (8th Cir. 1996) (relying on DSM-IV); Henderson v. Sullivan, 930 F.2d 19, 20 n.2 (8th Cir. 1991) (relying on DSM-III); U.S. v. Watson, 893 F.2d 970, 972 n.2 (8th Cir. 1990) (relying on DSM-III), *vacated in part by* U.S. v. Holmes, 900 F.2d 1322 (8th Cir. 1990).

157. DSM-IV at 424.

158. *See id.* DSM-IV specifies examples of the type of traumatic event that is necessary as "military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness." *Id.*

159. Caselaw confirms that alleged sexual harassment is not sufficient to constitute the stressor required to sustain a diagnosis of post traumatic stress disorder (PTSD). *See* Shepherd v. American Broad. Co., Inc., 862 F. Supp. 486, 493-94 (D.D.C. 1994), *vacated on other grounds*, 62 F.3d 1469 (D.C. Cir. 1995) (holding that PTSD claim based upon hostile environment sexual harassment fails as a matter of law because conduct of which plaintiff complained—"inexcusable sexist and racist jokes and insults"—did not constitute the requisite stressor); Broderick v. Ruder, 685 F. Supp. 1269, 1273 n.3 (D.D.C. 1988) (declining to accept plaintiff's expert's opinion that she had PTSD from sexual harassment because "[h]is analogy relating the . . . flood and the . . . nightclub fire to plaintiff's reaction to a sexually hostile work environment is not convincing"); *see also* Sterling v. Velsicol Chem. Corp., 855 F.2d 1188, 1209-10 (6th Cir. 1988) (discussing type of stressor necessary to sustain PTSD claim).

Counsel also must examine whether expert opinions satisfy *Daubert's* requirement of "knowledge" for purposes of Rule 702. That is, the opinions must be something more than unsupported speculation. If the issue is causation, counsel must also ensure that the expert has engaged in the requisite differential diagnosis or the expert's testimony may not satisfy *Daubert's* "knowledge" requirement.[160] If the expert in our MHRA case did not examine plaintiff during the period that plaintiff supposedly was subject to the harassment, but instead was retained after the lawsuit, it may be difficult to argue that the opinion is "knowledge" under Rule 702. At that late date, the conclusions would not be based upon objective evidence; instead, the opinions would be based exclusively on information plaintiff chose to provide. Such opinions would be vulnerable to the argument that they are precisely the "subjective belief" and "unsupported speculation" that the Court cautioned against in *Daubert*.[161]

Once the first requirement in Rule 702 is addressed—the opinion is based upon specialized knowledge—counsel must examine whether the testimony will assist the trier of fact. In this inquiry, counsel must ensure that the testimony is pertinent to an issue in the case and is sufficiently connected to the issue so as to

160. "Courts have insisted time and time again that an expert may not give opinion testimony to a jury regarding specific causation if the expert has not engaged in the process of differential diagnosis—that is, the process of eliminating other possible diagnoses." Rutigliano v. Valley Bus. Forms, 929 F. Supp. 779, 786 (D.N.J. 1996), *aff'd*, Valley Bus. Forms v. Graphic Fine Color, Inc., 118 F.3d 1577 (3rd Cir. 1997); *see also* Bennett v. PRC Pub. Sector Inc., 931 F. Supp. 484, 499 (S.D. Tex. 1996) ("[Proffered expert's] failure to meaningfully rule out or consider any of these [multiple, well-recognized, non-work related potential causes] is contrary to accepted methodology."); Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311, 1319 (9th Cir. 1995) ("[Proffered expert] offers no tested or testable theory to explain how, from this limited information, he was able to eliminate all other potential causes of birth defects.").

161. *See* Daubert v. Merrell Dow Pharm., 509 U.S. 579, 590 (1993). The Court of Appeals for the Eighth Circuit has found on numerous occasions that such speculative opinion evidence should be excluded. *See, e.g.*, Wright v. Willamette Indus., Inc. 91 F.3d 1105, 1108 (8th Cir. 1996) (stating that testimony of proposed expert on supposed cause of plaintiffs' injuries "was simply speculation" and should have been excluded; jury verdict reversed); Gier v. Educational Serv. Unit No. 16, 66 F.3d 940, 944 (8th Cir. 1995) (holding that the trial court properly excluded expert testimony that did not meet standards articulated in *Daubert*); Pestel v. Vermeer Mfg. Co., 64 F.3d 382, 384-85 (8th Cir. 1995) (holding that the trial court properly excluded expert testimony that did not meet standards articulated in *Daubert*).

assist the jury in resolving the issue.[162]

Even if the expert testimony is sufficiently reliable and helpful to satisfy Rule 702, counsel also must assess whether the proffered testimony may be excluded under Rule 403. As the Court noted in *Daubert:*

> Rule 403 permits the exclusion of relevant evidence "if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues or misleading the jury. . . ." Judge Weinstein has explained: "Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it. Because of this risk, the judge in weighing possible prejudice against probative force under Rule 403 of the present rules exercises more control over experts than over lay witness."[163]

Many Minnesota decisions examine Rule 403 in the area of admissibility of expert testimony independently from any examination of *Daubert's* interpretation of the requirements of Rule 702.[164] As the comment to Minnesota's Rule 403 notes, the rule "creates a balancing test" but "favors the admission of relevant evidence by requiring a determination that its probative value be 'substantially' outweighed by the dangers listed in the rule" before the evidence

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162. For an example of expert testimony that satisfies the first requirement of Rule 702, but is inadmissible because it is unhelpful to the jury, see *Daubert,* 509 U.S. at 591.

163. *Id.* at 595 (citations omitted).

164. *See, e.g.,* Bixler v. State, 582 N.W.2d 252, 256 (Minn. 1998), *cert. denied* 119 S. Ct. 620 (1998) (ruling that testimony not admissible because jury was capable of assessing defendant's propensity to please authority figures without expert psychological testimony on the subject); State v. Grecinger, 569 N.W.2d 189, 196-97 (Minn. 1997) (holding that defendant was not unfairly prejudiced under Rule 403 by admission of expert testimony on battered women syndrome as long as the testimony was properly limited so that the expert was not allowed to "suggest that the complainant was battered, was truthful or fit the battered woman syndrome. Likewise, the expert may not express an opinion as to whether the defendant was in fact a batterer."); State v. Borchardt, 478 N.W.2d 757, 761-62 (Minn. 1991) (holding that expert testimony on male sexual victimization was properly excluded under Rule 403 because the expert's theory "was based on a relatively undeveloped theory, but his status as an expert witness likely would have caused the jury to accept the theory as reliable and established"); Sorensen v. Maski, 361 N.W.2d 498, 500 (Minn. Ct. App. 1985) (holding that opinion testimony of accident reconstructionist as to speed, based upon location of appellant's vehicle and 121-foot skid mark was properly admissible under Rule 403 because "[t]here was nothing particularly confusing or misleading about this testimony").

will be ruled inadmissible.[165] To be properly prepared on the issue of admissibility of expert testimony, counsel must not ignore the Rule 403 inquiry.

VI. CONCLUSION

The *Daubert* trilogy provides a uniform approach for assessing expert testimony that does not allow trial courts to relinquish their responsibility for determining admissibility of expert opinion. This standard should be adopted in Minnesota. The role of trial judges in the 1990s can be analogized as making a trip from the calm, stable plains to the rigorous and intimidating mountains.[166] The Minnesota Supreme Court should give the Minnesota trial court bench the opportunity and responsibility to make this trip.

165. *See* MINN. R. EVID. 403 committee comment.

166. *See* Jack B. Weinstein, *Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended*, 138 F.R.D. 631, 633 (1991) ("The passivity of the plains is where we have been. There the lawyers and the adversarial system took almost all responsibility for presenting scientific proof. Now we judges are urged to move into the more arrogant mountains of administration, control and the responsibility for expert witnesses.").